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ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: **RABEPRAZOLE CALCIUM**

(57) Abstract: The present invention relates to calcium salts of rabeprazole and processes for preparing rabeprazole calcium. The invention also relates to pharmaceutical compositions that include the rabeprazole calcium and use of said compositions for the treatment or prevention of gastrointestinal ulcers

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A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C07D401/12 A61P1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C07D A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 19, 5 June 2001 (2001-06-05) & JP 2001 039975 A (EISAI CO LTD), 13 February 2001 (2001-02-13) cited in the application abstract	1-53
X	US 5 045 552 A (SHIMOMURA NAOYUKI ET AL) 3 September 1991 (1991-09-03) cited in the application column 4, line 10; column 5, lines 58-63 example 33	1-53

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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- \*Z\* document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB 03/05614

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
Although claims 45-47 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2001039975	A	13-02-2001	NONE
US 5045552	A	03-09-1991	
		AT 103912 T	15-04-1994
		AT 163011 T	15-02-1998
		AT 168111 T	15-07-1998
		AU 594836 B2	15-03-1990
		AU 8113887 A	19-05-1988
		CA 1265138 A1	30-01-1990
		CN 87107777 A , B	01-06-1988
		DE 3752167 D1	12-03-1998
		DE 3752167 T2	25-06-1998
		DE 3752201 D1	13-08-1998
		DE 3752201 T2	17-12-1998
		DE 3789536 D1	11-05-1994
		DE 3789536 T2	18-08-1994
		DK 131893 A	24-11-1993
		DK 144295 A	19-12-1995
		DK 575887 A	14-05-1988
		EP 0268956 A2	01-06-1988
		EP 0475456 A1	18-03-1992
		EP 0654471 A1	24-05-1995
		EP 0786461 A1	30-07-1997
		ES 2061471 T3	16-12-1994
		ES 2112260 T3	01-04-1998
		ES 2118457 T3	16-09-1998
		FI 874709 A , B,	14-05-1988
		GR 3026762 T3	31-07-1998
		HK 194296 A	01-11-1996
		HU 45524 A2	28-07-1988
		JP 2544567 B2	16-10-1996
		JP 5247035 A	24-09-1993
		JP 2576843 B2	29-01-1997
		JP 7291967 A	07-11-1995
		JP 1006270 A	10-01-1989
		JP 1953321 C	28-07-1995
		JP 6074272 B	21-09-1994
		KR 9103330 B1	27-05-1991
		LU 90396 A9	07-07-1999
		NL 990015 I1	02-08-1999
		NO 874477 A , B,	16-05-1988
		NZ 222488 A	26-05-1993
		US 5840910 A	24-11-1998
		US 5998445 A	07-12-1999
		DD 290192 A5	23-05-1991
		SU 1780535 A3	07-12-1992
		RU 2035461 C1	20-05-1995